Project WILD

Alignment with Maryland Voluntary State Curriculum¹ – High School¹ Science

Activity

OH DEER!

PAGE 36. GRADE 5-8+ STUDENTS WILL IDENTIFY AND DESCRIBE FOOD, WATER, AND SHELTER AS THREE ESSENTIAL COMPONENETS OF HABITAT; DESCRIBE THE IMPORTANCE OF GOOD HABITAT FOR ANIMALS: DEFINE "LIMITING FACTORS" AND GIVE EXAMPLES; AND RECOGNIZE THAT SOME FLUCTUATIONS IN WILDLIFE POPULSTIONS ARE NATURAL AS ECOLOGICAL SYSTEMS UNDERGO CONSTANT CHANGE.

Government/History

[potential exists to meet Government: 1.0 Political Science - A. The Foundations & Functions of Government: 3. Governmental roles & policies regarding public issues (1.1.3). b. (environmental issues); e. (environmental policy); C. Protecting **Rights & Maintaining Order: 3.** Impact of government decisions & actions (1.2.3). e. (MD Dept. of Environment regulations); **D. Modifying the Environment 1.** Role of government in addressing land use & other environmental issues (3.1.2). a-e; Government: 4.0 Economics - A. Scarcity

& Economic Decision-making. 1.

Economic costs & benefits & opportunity costs (4.1.2). d. (public policy issues, such as environmental concerns)].

Goal 1 Skills & Processes

Goal 3 Biology: 3.5 Interdependence of diverse living organisms & their interactions with the biosphere (biotic & abiotic factors; interrelationships & interdependencies among different organisms; natural & manmade changes in environmental conditions affect individuals & population dynamics; human activity & technology influences food webs); 3.4 Explain evolutionary change (natural selection; environmental pressures); **3.6** Investigate a biological issue (consequences & trade-offs between technology & environment; defend their position on biodiversity, population growth, global sustainability, etc.).

Goal 6: 6.0 Environmental Science: Interdependence of Organisms: 6.12.2 Why interrelationships & interdependencies

of organisms contribute to the dynamics of ecosystems (CLG 6.2.2); Conclude that populations grow or decline due to a variety of factors (CLG 6.2.3); 6.5.3 Identify the survival needs & interactions between organisms & the environment; Natural Resources and Human Needs: 6.12.4 Evaluate the interrelationships between humans & biological resources (CLG 6.3.4); [potential exists to meet Environmental **Issues: 6.5.5** Decisions influencing the environment may have benefits, drawbacks, and unexpected consequences no matter how carefully the decisions are made; 6.8.5 Human activities can accelerate or magnify many naturally occurring changes (i.e., erosion, air and water quality, populations). (MLO 6.2)].

AP Environmental Science

II. The Living World: A. Ecosystem Structure (biological populations & communities; ecological niches; interactions among species);

III. Population: A. Population Biology **Concepts** (population ecology; carrying capacity; survivorship);

[potential exists to meet VII. Global Change: C. Loss of **Biodiversity** 1. habitat loss; introduced, endangered & extinct species; 2. maintenance through conservation; 3. relevant laws & treaties.]

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Project WILD (cont'd)	Alignment with Maryland Voluntary State Curriculum ² – High School			
Activity	Government/History	Science	AP Environmental Science	
HAZARDOUS LINKS, POSSIBLE SOLUTIONS PAGE 326, GRADE 7-8+ STUDENTS WILL GIVE EXAMPLES OF WAYS IN WHICH PESTICIDES ENTER FOOD CHAINS; DESCRIBE POSSIBLE CONSEQUENCES OF PESTICIDES ENTERING FOOD CHAINS, AND DESCRIBE HOW REGULATIONS ATTEMPT TO CONTROL PESTICIDE USE.	[potential exists to meet Government: 1.0 Political Science - A. The Foundations & Functions of Government: 3. Roles & policies re: public issues (1.1.3). a. (EPA); b. (environmental issues); e. (environmental policy); B. Economic Systems & the Role of Government in the Economy. 3. Regulatory agencies & their social, economic, & political impacts (e.g. EPA) (4.1.3); C. Protecting Rights & Maintaining Order: 3. Impact of gov. decisions & actions (1.2.3). e. (EPA environmental standards; Md Dept. of Envir. regulations); D. Modifying the Environment 1. Role of gov. in addressing land use & other environmental issues; (3.1.2). a-e; Government: 4.0 Economics - A. Scarcity & Economic Decision-making. 1. Economic costs & benefits & opportunity costs (4.1.2). d. (public policy issues, such as environmental concerns); History: 5.2 (Clean Water Act; EPA regulations]	Goal 1 Skills & Processes Goal 3 Biology: 3.2 Cells exist in a narrow range of environ. conditions; changes in metabolic activity (toxic substances); 3.4 Evolutionary change (natural selection; environ. pressures); 3.5 Interdepen.of living organisms & their interactions w/biosphere (biotic/abiotic factors; interrelationships & interdepend. among organisms; natural & man-made changes affect individ. & pop. dynamics; human activity & tech. influence food webs); 3.6 Investigate a bio. issue (consequences/trade-offs of tech.; defend biodiv.; pop. growth; global sustain. Goal 4 Chemistry: 4.5 Chemistry's impact on society (food additives; hazardous waste disposal; synthetics). Goal 6.0 Environ. Science: Interdependence of Organisms: 6.12.2 Organisms are linked by the transfer & transformation of matter & energy at the ecosystem level (CLG 6.2.1); interrelationships & interdependencies of organisms contribute ecosystem dynamics (CLG 6.2.2); pops. grow/decline due to a variety of factors (CLG 6.2.3); Natural Resources & Human Needs: 6.12.4 impacts of human activities are both positive (recycling) & negative (toxic wastes); interrelationships between: humans & water quality (CLG 6.3.2); humans & biological resources (CLG 6.3.4); Envir. Issues: 6.3.5 Using the envir. has consequences; 6.5.5 Decisions influencing the environ. has benefits & unexpected consequences no matter how carefully made; 6.8.5 Human activities can accelerate or magnify many naturally occurring changes (MLO 6.2).	II. The Living World: A. Ecosystem Structure (biological populations & communities; interactions among species); B. Energy Flow (food webs & trophic levels; ecological pyramids); III. Population: A. Population Biology Concepts (population ecology; carrying capacity; survivorship); IV. Land & Water Use: A Agriculture 2. Controlling pests (costs/ benefits of pesticide use; relevant laws); VI. Pollution: A. Pollution Types 3. Water pollution (types; sources, causes & effects; relevant laws); B. Impacts on the Environment & Human Needs 2. Hazardous chemicals in the environment (biomagnification). [potential exists to meet VII. Global Change: C. Loss of Biodiversity 1. Habitat loss; introduced, endangered & extinct species; 2. Conservation; 3. Laws & treaties.]	

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Maryland Department of Natural Resources

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Government/History

AP Environmental Science

SEA TURTLES INTERNATIONAL PAGE 98, GRADES 9-12

STUDENTS WILL ANALYZE
POLICIES AND PHILOSOPHIES
THAT COUNTRIES HAVE
RELATING TO WILDLIFE
OWNERSHIP, PROTECTION &
HABITAT MANAGEMENT;
EXPLAIN THE IMPORTANCE OF
INTERNATIONAL AGREEMENTS
AND ORGANIZATIONS THAT
MANAGE SPECIES THAT CROSS
NATIONAL BOUNDARIES; AND
DEFINE THE DIFFERENCE
BETWEEN OWNERSHIP OF LAND
AND OWNERSHIP OF WILDLIFE.

Government

1.0 Political Science: A. The Foundations & Functions of Government: 3. Gov. roles & policies on public issues (1.1.3). a. (EPA); b. (environmental issues); e. (environmental policy); C. Protecting Rights & Maintaining Order: 3. Impact of gov. decisions & actions (1.2.3). e. (environmental standards set by the EPA; Md Dept. of Environment regulations); D. Modifying the Environment 1. Role of gov. in addressing land use & other environmental issues (3.1.2). a-e;

3.0 Geography: B. Geographic Characteristics of Places & Regions. 1. Roles & relationships of regions on formation & implementation of gov. policy (3.1.3). (population growth & impacts on environment; how natural resources & population define a region). c. how regional natural resources & environmental issues influence gov. policies; C. Movement of People, Goods & Ideas. 1. How demographics relate to political participants, public policy & gov. policies (3.1.1). d. population trends & projections & how they affect the environment;

4.0 Economics: A. Scarcity & Economic

Decision-making. 1. Economic costs & benefits & opportunity costs (4.1.2). d. (public policy issues, such as environmental concerns); **B. Economic Systems & the Role of Government in the Economy.** 3. Regulatory agencies & their social, economic, & political impacts (4.1.3). (e.g., EPA); **U.S. History 5.2** (Clean Water Act; regulations set by the EPA].

U.S. History: 5.2 Uunderstanding of political, economic & cultural developments from 1964-1980. Political Science (endangered species act);

Goal 1 Skills & Processes

Goal 3 Biology - 3.5 natural & man-made changes in environmental conditions affect individuals & dynamics of populations; food webs are influenced by human activity & technology); 3.6 Investigate a biological issue (consequences & tradeoffs between technology & the environment; defend their position (e.g., biodiversity, population growth, global sustainability).

Goal 6: 6.0 Natural Resources and **Human Needs: 6.12.4** Evaluate the interrelationships between humans and biological resources (CLG 6.3.4); Environmental Issues: 6.3.5 Using the environment to meet one's wants & needs has consequences (i.e., pollution, extinction): 6.5.5 Decisions influencing the environment may have benefits, drawbacks, and unexpected consequences no matter how carefully the decisions are made; 6.8.5 Human activities can accelerate or magnify many naturally occurring changes (i.e., populations); (MLO 6.2); **6.12.5** (with activity extension) The student will identify an environmental issue and formulate related research questions (CLG 6.4.1); Design & conduct research (CLG 6.4.2); Interpret findings to form conclusions and make recommendations to help resolve the issue (CLG 6.4.3).

II. The Living World: A. Ecosystem
Structure (biological populations &

communities); C. Ecosystem Diversity (biodiversity; ecosystem systems).

IV. Land & Water Use: A Agriculture: F. Fishing (fishing techniques; overfishing; aquaculture; relevant laws & treaties); G. Global Economics (globalization; World Bank; Tragedy of the Commons; relevant laws & treaties).

VII. Global Change: C. Loss of Biodiversity 1. Habitat loss; overuse; pollution; introduced, endangered & extinct species; 2. Maintenance through conservation: 3. Relevant laws & treaties.

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Project WILD Aquatic (cont'd)	Alignment with Maryland Voluntary State Curriculum ⁴ – High School		
Activity	Government/History	Science	AP Environmental Science
FASHION A FISH PAGE 56, GRADES 3+ STUDENTS WILL DESCRIBE ADAPTATIONS OF FISH TO THEIR ENVIRONMENT, HOW ADAPTATIONS HELP FISH SURVIVE IN THEIR HABITATS, AND INTERPRET THE IMPORTANCE OF ADAPTATIONS IN ANIMALS. NOTE: THIS ACTIVITY CAN INVOLVE ART.	None	[potential exists to meet Goal 3 Biology - 3.5 Investigate the interdependence of diverse living organisms & their interactions with the biosphere (relationships between biotic & abiotic factors; interrelationships & interdependencies among different organisms; natural & man-made changes in environmental conditions affect individuals & dynamics of populations; food webs are influenced by human activity & technology); 3.4 Explain the mechanism of evolutionary change (natural selection; environmental pressures); 3.6 Investigate a biological issue (consequences & trade-offs between technology & the environment; defend their position (e.g., biodiversity)].	II. The Living World A. Ecosystem Structure (ecological niches).

ⁱ Activities meet standards as noted. When a standard is listed without notation, the activity meets the standard fully for all applicable grades for that activity.

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